

## ABSTRACT OF THE DISCLOSURE

A gas turbine apparatus has a combustor 2 for combusting fuel to produce a combustion gas, a turbine 1 which is rotated by the combustion gas, an electric generator 5 coupled to the turbine 1, and a fuel flow control valve 10 configured to change an opening thereof. The gas turbine apparatus includes a first PID processing unit 16 to adjust the opening of the fuel flow control valve 10 so as to maintain a rotational speed of the turbine 1 substantially at a constant value, and a second PID processing unit 17 to adjust the opening of the fuel flow control valve 10 so as to maintain a temperature of a discharged combustion gas at temperatures lower than a predetermined temperature.

10 The gas turbine apparatus has an electric power controller 21 to control electric power to be generated by the electric generator 5 based on output values of the first PID processing unit 16 and the second PID processing unit 17.